Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claims 1-12 (canceled)

13. (currently amended) A plating bath, comprising:

a cobalt-phosphorous plating solution having a pH value in the range of about 1 to about 1.8;

cobalt metal ions contained within said plating solution;

chloride ions contained within said plating solution as sodium ~~alkali~~ chloride;

phosphorous ions contained within said plating solution as phosphorous acid (H_3PO_3) within a range of about 1.6 to 2.6 oz/gal;

boron ~~as an oxidizing agent~~ contained within said plating solution as perborate; ~~and~~

a hardening agent contained within said plating solution;

wherein a wear resistant cobalt-phosphorous-boron coating having a thickness of at least about 0.002 inch is obtained through electroplating in said plating solution, said coating containing cobalt in the range of about 85 to 90 weight percent, phosphorous in the range of about 10 to 15 weight percent, and boron.

14. (canceled)

15. (original) The plating bath of claim 13, wherein the cobalt

metal content of said plating solution is in the range of about 4.4 to 5.8 oz/gal.

16. (previously presented) The plating bath of claim 13, wherein a source of said cobalt metal ions includes cobalt sulfate or other cobalt salts.

17. (original) The plating bath of claim 13, wherein cobalt chips submerged in said plating solution is the source of said cobalt metal ions.

18. (original) The plating bath of claim 13, wherein cobalt balls submerged in said plating solution is the source of said cobalt metal ions.

Claims 19-22 (canceled)

23. (original) The plating bath of claim 13, wherein phosphite comprises said hardening agent.

24. (original) The plating bath of claim 23, wherein phosphorous acid provides said phosphite.

25. (previously presented) The plating bath of claim 23, wherein sodium phosphite or sodium hypophosphite provide said phosphite.

26. (original) The plating bath of claim 13, wherein said plating solution contains phosphate.

27. (original) The plating bath of claim 26, wherein said phosphate is selected from the group of phosphoric acid, cobalt phosphate, and sodium phosphate.

28. (currently amended) A cobalt-phosphorous plating solution, comprising:

cobalt sulfate ($CoSO_4.6H_2O$) within a range of about 20 to 26 oz/gal;

sodium chloride (NaCl) within a range of about 2 to 3.5 oz/gal;

boron as perborate within a range of about 1.6 to 2.6 oz/gal;

phosphite as phosphorous acid (H_3PO_3) within a range of about 1.6 to 2.6 oz/gal; and

phosphate as phosphoric acid (H_3PO_4) within a range of about 7 to 9 oz/gal;

wherein said cobalt sulfate, said sodium chloride, said perborate, said phosphorous acid, and said phosphoric acid are combined in tanks; ~~and~~

wherein said cobalt-phosphorous plating solution has a pH range of about 1 to 1.8; and

wherein a wear resistant cobalt-phosphorous-boron coating having a thickness of at least about 0.002 inch is obtained through electroplating in said plating solution.

29. (canceled)

30. (canceled)

31. (original) The cobalt-phosphorous plating solution of claim 28, wherein said cobalt-phosphorous plating solution has a surface tension of about of 35 to 50 dyne/cm.

32. (currently amended) The cobalt-phosphorous plating solution of claim 28, wherein said cobalt-phosphorous plating solution has a temperature of about ~~100~~ 110 to 160° F.

33. (canceled)

34. (previously presented) The cobalt-phosphorous plating solution of claim 33, wherein said anode comprises cobalt chips or cobalt balls.

35. (previously presented) The cobalt-phosphorous plating solution of claim 28, wherein a direct current is applied that generates a cathode current density in the range of about 60 to 288 Amps/ft^2.

36. (currently amended) A process for plating, comprising the steps of:

submerging a substrate having a catalytically active surface into a cobalt-phosphorous plating solution containing cobalt sulfate, sodium chloride, boron as perborate, phosphite as phosphorous acid (H_3PO_3) within a range of about 1.6 to 2.6 oz/gal, and phosphate, and having a pH value in the range of about 1 to about 1.8;

hooking said substrate as a cathode;

providing an anode and submerging said anode into said cobalt-phosphorous plating solution;

applying direct current between said cathode and said anode; and

applying a cobalt-phosphorous-boron wear resistant coating having a thickness of at least about 0.002 inch to said surface during a cobalt-phosphorous plating process;

wherein said coating contains cobalt in the range of about 85 to 90 weight percent, phosphorous in the range of about 10 to 15 weight percent, and boron.

37. (previously presented) The process for plating of claim 36,

further including the steps of:

cleaning and preparing said surface during a pretreatment process; and

finishing said surface during a post treatment process.

38. (currently amended) The process for plating of claim 37, wherein said pretreatment process comprises the steps of:

degreasing said surface;

masking areas of said surface not to be plated;

~~cleaning said surface using dry abrasive blast;~~

alkaline cleaning said surface; and

acid activating said surface

39. (canceled)

40. (previously presented) The process for plating of claim 37, wherein said post treatment process comprises the steps of:

demasking said surface; and

baking said surface having said cobalt-phosphorous-boron coating applied.

41. (currently amended) A process for plating an article of manufacture used in the aerospace industry, comprising the steps of:

providing a part of a commercial aircraft including a substrate having a surface to be plated;

degreasing said surface of said part;

masking areas of said surface not to be plated;

~~cleaning said surface using dry abrasive blast;~~

alkaline cleaning said surface;

acid activating said surface;

providing a cobalt-phosphorous plating solution, wherein said cobalt-phosphorous plating solution has a ph value in the range of about 1 to about 1.8 and comprises:

cobalt sulfate ($CoSO_4.6H_2O$) within a range of about 20 to 26 oz/gal;

sodium chloride (NaCl) within a range of about 2 to 3.5 oz/gal;

boron as perborate within a range of about 1.6 to 2.6 oz/gal;

phosphite as phosphorous acid (H_3PO_3) within a range of about 1.6 to 2.6 oz/gal; and

phosphate as phosphoric acid (H_3PO_4) within a range of about 7 to 9 oz/gal;

submerging an anode into said cobalt-phosphorous plating solution;

submerging said part into said cobalt-phosphorous plating solution;

hooking said part as a cathode;

applying direct current between said anode and said cathode that generates a cathode current density in the range of about 60 to 288 Amps/ft^2;

plating said surface of said part with a wear resistant cobalt-phosphorous-boron coating having a thickness of at least about 0.002 inch, wherein said cobalt-phosphorous-boron coating comprises:

cobalt in the range of about 85 to 90 weight percent;

phosphorous in the range of about 10 to 15 weight percent; and

demasking said surface;

baking said part having said cobalt-phosphorous-boron coating

applied within 8 hours of application of said coating; and

using said part having said cobalt-phosphorous-boron coating in a commercial aircraft.

42. (original) The process for plating an article of manufacture used in the aerospace industry of claim 41, further comprises the step of providing tanks that hold said cobalt-phosphorous plating solution.

43. (currently amended) The process for plating an article of manufacture used in the aerospace industry of claim 41, further comprises the step of heating said cobalt-phosphorous plating solution to a temperature of about ~~100~~ 110 to 160° F.

44. (original) The process for plating an article of manufacture used in the aerospace industry of claim 41, further comprising the step of applying said cobalt-phosphorous-boron coating to said surface at a plating rate of about 0.001 to 0.005 inch/hr.